What is claimed is:

1. A laser machining apparatus for machining a workpiece, wherein a laser emitted from an oscillator is dispersed into a first laser beam that is passed through a first polarizing means and is reflected, via a mirror, by a second polarizing means, and into a second laser beam that is reflected by the first polarizing means, scanned bi-axially by a first galvano-scanner, and passed through the second polarizing means, scanning by a second galvano-scanner being carried out, the laser machining apparatus characterized in that:

a third polarizing means for polarizing-angle adjustment, capable of angle adjustment, is disposed in front of the first polarizing means.

2. The laser machining apparatus as recited in claim 1 further characterized in that:

a sensor is provided for measuring energy of the laser beams, wherein the energy of the two laser beams is measured, and angle adjustment is performed by a third polarizing means for polarizing-angle adjustment, in order to extract the two laser beams with desired energy proportions.

3. The laser machining apparatus as recited in claim 1 further characterized in that:

based on a measuring means for measuring laser-beam focal position, focal positions of the two laser beams are measured, and adjustment is carried out by a focal position adjustment means, so that the difference

between the focal positions of the two laser beams is below a desired reference.

4. The laser machining apparatus as recited in claim 3, further characterized in that:

a deformable mirror is disposed along the light path of one of the two laser beams after the laser light has been dispersed, and a focal position adjustment means is provided for adjusting focal positions thereof by changing the focal length of the deformable mirror.

5. The laser machining apparatus as recited in claim 3, characterized in that:

the focal position adjustment means adjusts focal position by changing light path length of a light path, along the light path of one of the two laser beams after the laser beams have been dispersed.

6. The laser machining apparatus as recited in claim 5, further characterized in that:

the light path length is changed by making variable the attachment of reflection mirrors, disposed along the light path of the laser beam, for reflecting the laser beams.

7. A laser machining apparatus for machining a workpiece, wherein a laser emitted from an oscillator is dispersed into a first laser beam that is passed through a first polarizing means and is reflected, via a mirror, by a second polarizing means, and a second laser beam that is reflected by the first

polarizing means, scanned bi-axially by a first galvano-scanner, and passed through the second polarizing means, scanning by a second galvano-scanner being carried out, characterized in that:

focal positions of the two laser beams are measured, based on a measuring means for measuring the focal positions of the laser beams, and adjustment is carried out by a focal position adjustment means so that the difference between the focal positions of the two laser beams is below a desired reference.

8. The laser machining apparatus as recited in claim 7, further characterized in that:

a deformable mirror is disposed along the light path of one of the two laser beams after the laser beams have been dispersed, and a focal position adjustment means is provided for adjusting focal positions thereof by changing the focal length of the deformable mirror.

9. The laser machining apparatus as recited in claim 7, characterized in that:

the focal position adjustment means adjusts focal position by changing light path length of a light path, along the light path of one of the two laser beams after the laser beams have been dispersed.

10. The laser machining apparatus as recited in claim 7, further characterized in that:

light path length is changed by making variable the attachment of reflection mirrors, disposed along the light path of a laser beam, for

reflecting the laser beams.

11. The laser machining apparatus as recited in claim 1 or claim 7, characterized in that:

reflective faces of the first and the second polarizing means are disposed facing each other, to form light paths in which the light path lengths of each of the dispersed laser beams are each the same.